

## INTERNATIONAL SEARCH REPORT

International application  
PCT/US04/37587

### BOX III. OBSERVATIONS WHERE UNITY OF INVENTION IS LACKING

Group 1, claim(s) 1-2, in part, drawn to nucleic acids from human chromosome 5 which comprise an allele of each of at least two microsatellite markers flanking SEQ ID NO: 1, in combination on chromosome 5, and in combination with additional genetic material as set forth in claim 2.

Group 2, claim(s) 3-11, in part, drawn to a method of diagnosing dyslexia or a predisposition to dyslexia by analyzing the presence of one or more of haplotype 8, 9, or 10, or nucleic acids of claim 2.

This application contains claims directed to more than one species of the generic invention. These species are deemed to lack unity of invention because they are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In order for more than one species to be examined, the appropriate additional examination fees must be paid. The species are as follows: It is noted that the claims in group 2, refer to species in claims 1 and 2, therefor, if applicant further elects group 2, the following species will apply to either group 1 or group 2.

In claim 1, the species are haplotype 8, haplotype 9, or haplotype 10.


In claim 2, section b, the species are residue 2286 or residue 3282. In claim 2, section c, the species are haplotype 1, haplotype 2, haplotype 3, haplotype 4, haplotype 5, haplotype 6, or haplotype 7.

The first named species is drawn to haplotype 8 for claim 1, residue 2286 for section b of claim 2, and haplotype 1 for section c of claim 2. Therefore, if applicant does not wish to pay for additional groups, the first named group, claims 1-2, directed to the species of haplotype 8, residue 2286, and haplotype 1 will be searched and examined. If applicant wishes to pay for an additional group, or additional species, applicant is requested to indicate such.

The inventions listed as Groups 1 and 2 do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: Claim 1 is drawn to genetic material from human chromosome 5 which comprises certain alleles. Such material encompasses an array of nucleic acids which include the selected alleles. Fodor et al (US Patent 6,582,908) teaches an array of all possible 10 mer nucleic acids, which reads on the genetic material of claim 1. Therefor, claim 1 does not represent a special technical feature over the prior art. Accordingly, the claims lack the same or corresponding special technical feature.

The species listed above do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, the species lack the same or corresponding special technical features for the following reasons: Each species is drawn to a different haplotype or mutation. The species are therefore drawn to structurally and functionally distinct nucleic acids. As such, the different species do not share the same or corresponding special technical feature.

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Continuation of B. FIELDS SEARCHED Item 3:

East, Caplus, Medline

search terms: chromosome 5, dyslexia, microsatellite, D5S1487, D5S617

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## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : C07H 21/04  
US CL : 536/23.1

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
U.S. : 536/23.1

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
Please See Continuation Sheet

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	PETRYSHEN. T.L. et al. Evidence for Sysceptibility Locus on Chromosome 6q Influencing Phonological Coding Dyslexia. American Journal of Medical Genetics. 2001. Vol 105, pages 507-517.	1, 2
P, A	HEISER. P. et al. Molecular Genetic Aspects of Attention-Deficit/Hyperactivity Disorder. Neuroscienc and Biobehavioral Reviews. October 2004. Vol 28, pages 625-641.	1, 2

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

### \* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance  
"E" earlier application or patent published on or after the international filing date  
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)  
"O" document referring to an oral disclosure, use, exhibition or other means  
"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention  
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone  
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art  
"&" document member of the same patent family

Date of the actual completion of the international search

17 October 2005 (17.10.2005)

Date of mailing of the international search report

08 NOV 2005

Name and mailing address of the ISA/US

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# INTERNATIONAL SEARCH REPORT

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## Box No. II Observations where certain claims were found unsearchable (Continuation of Item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:  
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:  
Please See Continuation Sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying additional fees, this Authority did not invite payment of any additional fees.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.: 1, 2, haplotype 8, position 2286, haplotype 1

- Remark on Protest**
- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- ☐ No protest accompanied the payment of additional search fees.